

1099-35-131

Dat Tien Cao* (dtcznb@mail.missouri.edu), Mathematics Department, University of Missouri, Columbia, MO 65211, and **Igor E. Verbitsky** (verbitskyi@missouri.edu), Mathematics Department, University of Missouri, Columbia, MO 65211. *Existence and Pointwise Estimates of solutions to subcritical Quasilinear elliptic equations.*

In this paper we study the following problem

$$\begin{cases} -\Delta_p u = \sigma u^q & \text{in } \mathbb{R}^n \\ \inf_{x \in \mathbb{R}^n} u(x) = s, s \geq 0, \end{cases}$$

where $\Delta_p u = \nabla \cdot (\nabla u |\nabla u|^{p-2})$ is the p -Laplacian, $1 < p < n$ and $0 < q < p - 1$, σ is a locally finite nonnegative Borel measure. We give necessary and sufficient conditions for the existence of a positive solution, bilateral pointwise estimates of solutions in terms of Wolff's potential. These will extend the results of Brezis and Kamin to the case $p \neq 2$.

(Received February 04, 2014)